UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,327	06/12/2001	David Arthur Stephenson	10013048-1	5780

7590   09/27/2005

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EXAMINER
INGBERG, TODD D

ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _04 April 2005_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _2-20_ is/are pending in the application.

   4a) Of the above claim(s) _1_ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _2-20_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _16 October 2001_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _9/19/2005_.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Status

Claim 1 has been canceled
Claim 2 has been amended
Claims 2 – 20 have been examined.

Interpretations

1.   The following interpretations are made in view of the Specification.

A. embedding within the software program a user-defined measurement type instance based one of a plurality of **redefined measurement types**; and storing data structures representing the embedded user-defined measurement type instance.

B. the **user-defined measurement type instance includes a measurement type designation and associated variables**

C. data structures representing the embedded user-defined measurement type instance are created and maintained by routines of a library.

D. the predefined measurement types include: **an atomic measurement type**

E. additional data structures representing aggregate measurement type instances based on the embedded user-defined measurement type instance are generated and stored by the library, the **aggregate measurement types accumulated data over a period of time from data states generated for the embedded user-defined measurement type instance.**

F. wherein **aggregate measurement types** include: a count measurement type; a group measurement type; a sum measurement type; and a threshold measurement type.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.   Claims 2 – 20 are rejected under 35 U.S.C. 101 because they are not tangibly embodied

on a compute readable medium or presenting functional descriptive material with out steps. The

Examiner has provided a way to overcome this rejection.

Claim 2
A method for instrumenting a software pram, the method comprising **the steps of** :
embedding within the software program a user-defined measurement type instance based one of
a plurality of predefined measurement types, wherein the user-defined measurement type
instance includes a measurement type designation and associated variables; and
storing data structures representing the embedded user-defined measurement type instance.

Claim 7
A method for collecting data by a library **tangibly embodied on a computer readable medium,
comprising the steps** of from a user-defined measurement type instance embedded within a
software program, the user-defined measurement type instance having a measurement type
selected from among an atomic measurement type, a transaction measurement type, and a polling
measurement type, and the library containing one or more additional aggregation measurement
types based on the user defined measurement type, the method comprising: receiving data states,
comprising current values of variables associated with
the embedded user-defined measurement type instance. generated during execution of the
software program; filtering the data states; processing data contained in the data states to produce
output data according to one or more measurement type instances with which the data states are
associated; and packaging output data into reports.
\Claim 13
A software program instrumentation system **tangibly embodied on a computer readable
medium** comprising: a library that manages a data structure that represents a software program
with an embedded user-defined measurement type instance having a measurement type selected
from among predefined measurement types and associated with variables. the library managing
data structures that represent the embedded user-defined measurement type, the embedded user-
defined measurement type instance, and one or more additional aggregate measurement types
based on the embedded user-defined measurement type instance, the library collecting data states
generated from current values of the variables associated with the embedded user-defined
measurement type instance and generating reports based on the collected data states; and a data
analysis routine that configures the data structures by altering values of fields within the data
structures to control data collection and reporting by the library, and that receives the generated
reports from the library.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA

35 U.S.C. 102(e)).

5.   Claim 2 is rejected under 35 U.S.C. 102(e) as being anticipated by USPN # 6,079,032

Peri filed May 19, 1998 and published June 20, 2000.

Claim 2
A method for instrumenting a software pram, the method comprising:
embedding within the software program a user-defined measurement type instance based one of
a plurality of predefined measurement types, wherein the user-defined measurement type
instance includes a measurement type designation and associated variables; and
storing data structures representing the embedded user-defined measurement type instance.
Examiner's Response

 Peri anticipates a method for analyzing performance of a software measurement type instance in
the software (Abstract, lines 3 – 5) whereby the predefined measurements are of the types of run-
time metrics (Abstract, lines 5-6). Peri further teaches the run-time metrics measurement types
associated with other variables such as range break points (Abstract, lines 6-8) . Finally Peri
provides storing the embedded user defined measurement type instance (Col 3, lines 41 – 60,
also see figure 2 item # 206).

Allowable Subject Matter

6.   Claims 3 – 6 are objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including all of the limitations of the base claim and

any intervening claims.

7.   Claims 7 – 20 are allowed.

8.   The remaining claims are presented below:
Claim 3
The method of claim 2 wherein the user-defined measurement type instance is associated with a
data state comprising the current values of the associated variables. and wherein the data
structures representing the embedded user-defined measurement type instance are created and
maintained by routines of a library.

Claim 4
The method of claim 3 wherein the predefined measurement types include: an atomic
measurement type, a data set for which can be transmitted to the library at points in time selected
by the software program; a transaction measurement type, data collection for which can be
started and ended by the software program, and, upon ending, results in transmission of a data set
to the library; and a polling measurement type. data sets for which are obtained by the library
from the software program at regular intervals.

Claim 5
The method of claim 3 wherein the additional data structures representing aggregate
measurement type instances based on the embedded user-defined measurement type instance are
generated and stored by the library, the aggregate measurement types accumulated data over a
period of time from data states generated for the embedded user-defined measurement type
instance.

Claim 6
The method of claim 5 wherein aggregate measurement types include: a count measurement
type; a group measurement type; a sum measurement type; and a threshold measurement type.

Claim 7
A method for collecting data by a library from a user-defined measurement type instance
embedded within a software program, the user-defined measurement type instance having a
measurement type selected from among an atomic measurement type, a transaction measurement
type, and a polling measurement type, and the library containing one or more additional
aggregation measurement types based on the user defined measurement type, the method
comprising: receiving data states, comprising current values of variables associated with

the embedded user-defined measurement type instance. generated during execution of the software program; filtering the data states; processing data contained in the data states to produce output data according to one or more measurement type instances with which the data states are associated; and packaging output data into reports.

Claim 8
The method of claim 7 wherein filtering of a data state further includes applying a filter expression to the variable values contained in the data state to determine whether or not to accept the data state for further processing.

Claim 9
The method of claim 8 wherein a filter expression may be associated with each measurement type instance.

Claim 10
The method of claim 7 wherein processing data contained in a data state to produce output data further includes: selecting each measurement type instance associated with the data state;
for each selected measurement type if the measurement type, is derived from the atomic or polling measurement type, including the variable values in the data state in the output data,
if the measurement type is derived from the transaction data type, including the variable values in the in the data state in the output data along with a calculated value equal to a transaction duration; and if the measurement type is an aggregate measurement type;
accumulating data for subsequent data output.

Claim 11
The method of claim 7 further including transmitting the reports to a data analysis component.

Claim 12
The method of claim 7 further including transmitting a description of the embedded user-defined measurement type instance and any aggregate measurement type instances based on the embedded user-defined measurement type instance to a data analysis component. which then transmits configuration information back to the library to control collection and reporting of output data.

Claim 13
A software program instrumentation system comprising: a library that manages a data structure that represents a software program with an embedded user-defined measurement type instance having a measurement type selected from among predefined measurement types and associated with variables. the library managing data structures that represent the embedded user-defined measurement type, the embedded user-defined measurement type instance, and one or more additional aggregate measurement types based on the embedded user-defined measurement type instance, the library collecting data states generated from current values of the variables associated with the embedded user-defined measurement type instance and generating reports based on the collected data states; and a data analysis routine that configures the data structures

by altering values of fields within the data structures to control data collection and reporting by the library, and that receives the generated reports from the library.

Claim 14
The software program instrumentation system of claim 13 wherein the predefined measurement types include: an atomic measurement type, a data set for which can be transmitted to the library at points in time selected by the software program; a transaction measurement type, data collection for which can be started and ended by the software program, and, upon ending, results in transmission of a data set to the library; and a polling measurement type, data sets for which are obtained by the library from the software program at regular intervals.

Claim 15
The software program instrumentation system of claim 13 wherein the one or more additional aggregate measurement types are derived from predefined aggregate measurement types including: a count measurement type that accumulates, over a data collection interval, a count of data states associated with the embedded user-defined measurement type instance; a group measurement type that accumulates, over a data collection interval, a count of data states associated with the embedded user-defined measurement type instance and some number of additional embedded user-defined measurement type instances; a sum measurement type that accumulates, over a data collection interval, statistical quantities derived from a variable value within the data states; and a threshold measurement type that accumulates, over a data collection interval, a count of data states associated with the embedded user-defined measurement type instance that contain variable values that produce an acceptance output from a threshold test expression.

Claim 16
The software program instrumentation system of claim 15 wherein the sum measurement type accumulates components of statistical quantities, including median, average, and standard deviation, so the running medians, averages, and standard deviations may computed over time from multiple reports.

Claim 17
The software program instrumentation system of claim 13 wherein the library collects data states generated from current values of the variables associated with the embedded user-defined measurement type instance by: filtering the data states based on filtering criteria associated with each measurement type instance in order to direct a data state to each measurement type instance with which it is associated providing that the data state is accepted for the measurement type instance by the filtering criteria; for an accepted data state directed to a transaction measurement type instance, calculating a duration value for the transaction and including that duration value in the data state; for an accepted data state directed to an aggregation measurement type instance, processing the data state according to the aggregation measurement type of the aggregation measurement type instance; and outputting the data state for the user-defined measurement type instance, when the user-defined measurement type instance is configured for

output, into a report; and outputting accumulated data for aggregation measurement type instances at a next accumulation interval into a report.

Claim 18
The software program instrumentation system of claim 13 wherein an aggregate measurement type instance may include key variables that control partitioning of accumulated data into a set of accumulated data, each accumulated data of the set output into a report at a next accumulation interval by the library.

Claim 19
The software program instrumentation system of claim 18 wherein only the highest values within a set of accumulated data are output into a report at a next accumulation interval by the library.

Claim 20
The software program instrumentation system of claim 13 wherein the reports are XML: documents.
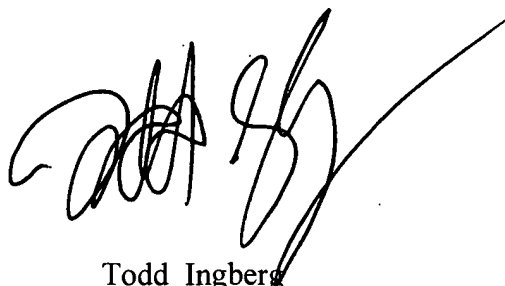
Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd Ingberg whose telephone number is (571) 272-3723. The examiner can normally be reached on during the work week..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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